# Econ 400-002: Elementary Statistics

UNC at Chapel Hill, Department of Economics

Summer I 2014



#### Instructor Information:

Ryan Leary Office: Phillips Hall Annex 103 Email: rleary@live.unc.edu Office Hours: We 2:00-2:30pm, Fr 2:00-2:30pm. Subject to change based upon demand

### Class Schedule:

Lecture: Mo,Tu,We,Th,Fr 11:30am-1:00pm Gardner Rm 209

### Course Materials:

**Required Text:** Statistics,  $12^{th}$  ed. by James T. McClave and Terry Sincich; Pearson; ISBN-10: 0321755936. No older editions please, it's important we all have the same one.

**Recommended Text:** *Statistics*, 7<sup>th</sup> ed. Newbold, Carlson, Thorne; Prentice Hall; ISBN-10: 0136085369. Don't feel compelled to buy.

**Laptop:** We will be doing in class examples and some will require a laptop. As a general rule, please bring your laptop to class.

#### Required Software:

**Sakai:** Assignments, announcements, grades, readings, and other information will be posted at sakai.unc.edu. Sakai will be the primary method of communication for this course, so please check it frequently.

Stata: STATA is a statistical analysis software that we will use throughout the semester. In class examples will often be completed with STATA. Moreover, many (if not all) of your homework assignments will require analyzing data in STATA. You have three main options for accessing STATA: i) You may purchase STATA at a discounted price. Visit http://www.stata.com/order/new/edu/gradplans/gp-direct.html for ordering information. We will be using STATA/IC 13. Product codes ICGP6 (6mth license), ICGPA (1yr license), and ICGP (perpetual license) are suitable for our class. Note: If you wish to pursue Econ 570 or write an empirical paper for any of your future classes, the perpetual license might be preferable. Purchasing STATA for use on your laptop computer will make things easiest for you, especially for in class exercises. ii) You can access STATA using the virtual computer lab at https://vcl.unc.edu/index.php?mode=selectauth or Note that as we will be using STATA for in class exercises, you will need to utilize option 1 or 2. iii) Some computers at the Undergraduate library have STATA loaded.

## Classroom Etiquette:

Although you will need a computer for some parts of the class, keep it closed unless we are doing an exercise. Never use it for surfing the web as this is distracting to your classmates. Please keep your cellphone silent during class. Everyone forgets once in a while but do your best to remember as this can also be a distraction.

<u>Goal of Course</u>: By the end of the course you should be comfortable with the foundations of statistical theory. Moreover, you should be able to employ common statistical techniques to answer basic research questions regarding the relationship among economic variables. Along the way, you will develop a level of proficiency with STATA, which will be useful in myriad empirical situations throughout your career.

Grading	% of Course Grade	Date	Details & Policy
Final Exam	(35%)	06/16/14 11:30 - 2:30pm	Comprehensive exam. Students who miss
			the final exam must have an excused
			absence form from their deans or student
			health in order to be given make-up
			examinations.
Midterm	(35%)	05/30/14 In Class	If you miss the midterm your final exam
			will count as 70 $\%$ of your course grade. I
			highly encourage you to attend the
			midterm.
Homework	(30%)	TBD	There will be approximately four
			homework assignments throughout the
			semester. No "make-ups" will be given.
			If you miss an assignment due to an
			"excused" absence, your Homework grade
			will be re-weighted among the remaining
			homework assignments.

Students associated with Disability Services must contact me one week prior to each Test.

Excused Absences: Illness or participation in University sanctioned activities. Documentation from coach or doctor must be provided. You must fill out the "Excused Absence" form found on the Sakai site, and turn it in to me as soon as possible.

Letter grades are computed from the total points earned during the semester and assigned based on the scale nearby. There is no maximum number of A's nor B's awarded. However, in previous courses 20% - 25% of my students have earned in the A range, 30% - 40% have earned in the B range, and 20% - 30% have earned in the C range. Although the grade distribution may change this semester, the past scores should give you a sense of my grading standards.

А	$x \ge 95\%$
A-	$90 \le x < 95$
B+	$85 \le x < 90$
В	$80 \le x < 85$
B-	$75 \le x < 80$
C+	$70 \le x < 75$
С	$65 \le x < 70$
C-	$60 \le x < 65$
D+	$50 \le x < 60$
D	$40 \le x < 50$
F	x < 40

# Tentative Course Outline

Week 1	Describing Data
Week 2	Probability and Discrete Probability Distributions
Week 3	Continuous Probability Distributions
Week 4	Estimation of Means and Proportions and Hypothesis Testing
Week 5	Linear and Multiple Regression Analysis